



## **Second-in-Command (SIC) Training Syllabus**

Current as of August 1, 2024





**EFT's Mission:** To train safer pilots in all aspects of aviation

**Vision statement:** Provide personalized initial and recurrent training that embodies a safe pilot culture and develops sound aeronautical decision making.

**Objectives:**

Train safer pilots through superior instruction

Train to proficiency

Foster operational excellence

Offer an economical alternative without sacrificing quality

Exceed FAA and insurance requirements for initial and recurrent training

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## **Purpose**

The purpose of the EFT Second-in-Command (SIC) Training Program is to equip experienced pilots with the knowledge, skills, and competencies required to perform the duties of a Second-in-Command in complex and technically advanced aircraft. This comprehensive, insurance-approved training ensures that SICs can effectively support the Pilot-in-Command (PIC) in all phases of flight, adhere to regulatory requirements, and respond appropriately to normal, abnormal, and emergency situations.

## **Course Duration:**

The EFT SIC course is programmed for client self-study plus one day of in-person training with an instructor in order to ensure all 14 CFR Part 61.55 requirements are accomplished. If an SIC type rating is desired for OCONUS operations, the pilot must complete part two prior to training at EFT.

## **FAA Requirements for SIC Type Rating**

To meet the FAA requirements for Second-in-Command type rating as outlined in 14 CFR Part 61.55, the training program includes the following elements:

### **1. Ground Training**

- **Aeronautical Knowledge**
  - Applicable parts of the 14 CFR, including parts 61 and 91.
  - Aircraft systems, performance, and limitations.
  - Normal and emergency procedures.
  - Weight and balance computations.
  - Use of performance charts.
  - Principles of aerodynamics and aircraft operations.
  - Meteorology applicable to the aircraft.
  - Approved Airplane Flight Manual (AFM) and Pilot Operating Handbook (POH).
  - Crew Resource Management (CRM) and Aeronautical Decision Making (ADM).

### **2. Flight Training**

- **Maneuvers and Procedures**
  - Preflight preparation, including flight planning and aircraft inspection.
  - Taxiing and ground operations.
  - Normal takeoffs and landings.
  - Crosswind takeoffs and landings.

- Climb and descent procedures.
- Level flight, turns, and stall prevention and recovery techniques.
- Approach and landing procedures, including go-arounds.
- Engine-out procedures and single-engine performance operations.
- In-flight maneuvers, including steep turns and emergency descents.
- Instrument flight maneuvers, including holding patterns, instrument approaches, and missed approach procedures.
- Use of navigation systems and ATC procedures.
- Emergency operations, including simulated engine failure and other in-flight emergencies.

### **3. Airman Certification Standards (ACS)**

- **Knowledge and Skill Evaluations**

- Successfully pass a knowledge test covering the required aeronautical knowledge areas.
- Demonstrate proficiency in performing flight maneuvers and procedures required for the SIC role.
- Evaluate using the FAA's Airman Certification Standards (ACS) specific to the aircraft.

### **4. Additional Requirements**

- **Crew Coordination and Communication**

- Effective communication and coordination with the PIC and other crew members.
- Application of CRM principles to enhance safety and operational effectiveness.

- **Documentation and Certification**

- Completion of a logbook endorsement by the instructor verifying satisfactory completion of SIC training.
- Application for an SIC type rating, including submission of required documentation to the FAA.

## Learning Objectives

1. **Mastery of Aircraft Systems:** Gain in-depth understanding of aircraft systems, including normal and emergency operations, limitations, and performance data.
2. **Proficient Use of SOPs and Checklists:** Demonstrate accurate and efficient use of Standard Operating Procedures (SOPs) and checklists to ensure safe and standardized operations.
3. **Effective Crew Coordination and Communication:** Develop strong Crew Resource Management (CRM) skills to enhance communication, coordination, and decision-making within the cockpit.
4. **Handling of Abnormal and Emergency Situations:** Execute appropriate responses to abnormal and emergency situations, utilizing memory items and established procedures.
5. **Competence in VFR and IFR Operations:** Exhibit proficiency in Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) operations, including navigation, approach, and landing procedures under various conditions.

**Part 1: In Aircraft Training *If Type Rating is Desired* – required for OCONUS operations (must be accomplished prior to training at EFT)**

*Note: There is no practical test required for the issuance of the SIC Privileges Only” pilot type rating.*

**For complete guidance, please refer to the final rule or 14 CFR 61.55. The summary of the process is as follows:**

- 1) The SIC pilot type rating applicant receives familiarization training under 61.55(b) from a qualified pilot in command or an authorized flight instructor who holds the aircraft type rating on his/her pilot certificate.
- 2) The trainer signs the applicant’s logbook or training record after each lesson in accordance with 61.51(h)(2). In lieu of the trainer, it is permissible for a qualified management official within the organization to sign the applicant’s training records or logbook and make the required endorsement. See 61.55 for the definition of a qualified management official.
- 3) The trainer or qualified management official makes an endorsement in the applicant’s logbook that states “[Applicant’s Name and Pilot Certificate Number] has demonstrated the skill and knowledge required for the safe operation of the [Type of Aircraft], relevant to the duties and responsibilities of a second-in-command.”
- 4) The applicant completes and signs an Airman Certificate and/or Rating Application, FAA Form 8710-1, and presents the application and a paper copy of the training records containing the signature of the trainer or qualified management official to a FSDO or Examiner.
- 5) The person who provided the ground and flight training to the applicant must sign the “Instructor’s Recommendation” section of FAA Form 8710–1.
- 6) The applicant must appear in person at FSDO or to an Examiner with his or her logbook/training records and with the completed and signed FAA Form 8710–1.

## **Part 2: Self-Study (must be accomplished prior to training at EFT)**

### **1. Aircraft Systems**

- Comprehensive review of aircraft systems, including:
  - Avionics
  - Engines
  - Hydraulics
  - Electrical systems
  - Pressurization and environmental control systems

### **2. FAA Regulations**

- Study of relevant FAA regulations, including:
  - 14 CFR Part 61 (Certification: Pilots, Flight Instructors, and Ground Instructors)
  - 14 CFR Part 91 (General Operating and Flight Rules)
- Understanding of regulatory requirements specific to SIC duties and responsibilities



## Part 3: Two-Day Course

### Day One

#### 1. Morning Session: Academics

- Detailed study of aircraft systems, normal and emergency operations, and limitations
- Review of Standard Operating Procedures (SOPs) and checklists
- In-depth discussion on Crew Resource Management (CRM) and Aeronautical Decision Making (ADM)
- Examination of pre-flight and post-flight inspections, cockpit setup, and crew coordination practices

#### 2. Afternoon Session: Simulator Training

- **Objective:** Demonstrate proficiency in IFR operations, emergency procedures, and decision-making during critical phases of flight
- **Scenario:**
  - Conduct an IFR flight, including standard departure, en-route, and approach phases
  - encounter a hydraulic system malfunction during cruise
  - Implement procedures to address the hydraulic issue and safely continue the flight to a safe landing. Discuss the impacts of a contaminated runway during landing.
  - During cruise, experience an electrical system failure, manage the emergency, and execute a safe landing
  - Engine failure during an instrument approach
  - Execute a single-engine missed approach procedure
  - Divert to an alternate airport and conduct a single-engine landing
- **Focus Areas:**
  - Proper execution of checklists at each phase
  - Use of standard callouts and communication protocols
  - Adherence to aircraft operating limits
  - Immediate response using memory items during emergencies (e.g., engine fire, rapid decompression)
  - Identification and diagnosis of hydraulic and electrical issues

- Execution of emergency procedures
- Communication with ATC and coordination with PIC
- Safe landing under abnormal conditions
- Proficient IFR navigation and approach procedures
- Engine-out operations and single-engine performance management
- Decision-making and coordination during critical phases
- Safe diversion and landing at an alternate airport



Pilot, \_\_\_\_\_ Commercial/ATP certificate # \_\_\_\_\_

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**Optional training. Only required for SIC Type Rating (required for OCONUS operations)**

**has performed and logged pilot time in a \_\_\_\_\_, which included:**

- Three takeoffs and three landings to a full stop as the sole manipulator of the flight controls.
- Engine-out procedures and maneuvering with an engine out while executing the duties of pilot in command.
- Crew resource management training.

Chief Pilot / CFI signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Certificate # \_\_\_\_\_

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**has successfully completed training in the following areas on \_\_\_\_\_:**

- Operational procedures applicable to the powerplant, equipment, and systems.
- Performance specifications and limitations.
- Normal, abnormal, and emergency operating procedures.
- Flight manual.
- Placards and markings.

EFT Contract IP signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Certificate # \_\_\_\_\_

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***has demonstrated the skill and knowledge required for the safe operation of the \_\_\_\_\_, relevant to the duties and responsibilities of a second-in-command.***

CFI / EFT Contract IP signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Certificate # \_\_\_\_\_



## **Appendices and Resources**

- **Appendix A: Reference Materials**
  - Compilation of manuals, handbooks, and regulatory documents relevant to aircraft operations
- **Appendix B: Checklists and SOPs**
  - Access to Standard Operating Procedures (SOPs) and checklists specific to the aircraft for quick reference
- **Appendix C: Contact Information**
  - Directory of instructors, support staff, and regulatory authorities for assistance and guidance throughout the training program

This detailed syllabus is designed to provide comprehensive training for experienced pilots transitioning to the role of Second-in-Command (SIC). It combines theoretical knowledge with practical skills development to ensure safe, efficient, and effective operational capabilities in diverse flight environments.